

PATENT
450111-03686**BEST AVAILABLE COPY****REMARKS/ARGUMENTS**

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-15 are currently pending. Claims 16 and 17 are hereby canceled. Claims 1, 8 and 15 are independent. Claims 1, 3, 4, 8-11 and 15 are hereby amended. No new matter has been introduced. Support for this amendment is provided throughout the Specification as originally filed.

Changes to the claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. ALLOWABLE SUBJECT MATTER

Applicants thank the Examiner for noting that claims 4 and 11 recite allowable subject matter.

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450111-03686**III. EXAMINER'S SUGGESTIONS AND OBJECTIONS**Specification

The specification is herein amended to comport with the preferred layout of the specification as suggested by the Examiner.

Drawing Objections

The Office Action Summary indicates that the drawings filed on November 8, 2001 are objected to by the Examiner. However, the Office Action does not illuminate which drawings, if any, are objected to, nor are Applicants provided with any specific objections.

Thus, no amendments are being made to the drawings at this time. Applicants respectfully request withdrawal of this objection.

IV. REJECTIONS UNDER 35 U.S.C. §102

Claims 1-3, 5-10 and 12 - 17 were rejected under 35 U.S.C. §102 as allegedly anticipated by U.S. Patent No. 6,570,918 to Rademacher. Applicants respectfully traverse this rejection.

Independent claim 1 recites, *inter alia*:

"a plurality of branch processing means . . . each . . . arranged to modify the received signal by the operations of:
(i) data equalization, based on a respective filter using a respective set of weights . . . " (emphases added)

As understood by the Applicants, Rademacher discloses a receiver having an equalizer (22) for processing the received spread spectrum signal before it is further processed in a rake detector (26). The receiver includes a filter to filter the received radio signals. The filter (22, 24) is an equalizer (22). Col. 4, lines 12-26 and FIG. 3. A receiver controller (28) adapts delay signals from a pilot rake detector (30) to modify the equalizer coefficients of the equalizer (22).

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The equalizer (22) output signals are provided to a decimator 24 that provides chip rate signals to each of the rake fingers (26) forming a rake detector. Col. 6, lines 59-63. See, also, column 7, lines 30-60. The rake detector combines several path components for a receiver to increase the signal-to-noise ration.

Rademacher is thus characterized by having a single processing branch that includes a single equalizer (22) which is adapted under the control of the receiver controller (28) to provide signals to multiple rake fingers (26).

In contrast, claim 1 recites, “a plurality of branch processing means . . . each . . . arranged to modify the received signal by the operations of: (i) data equalization, based on a respective filter using a respective set of weights . . .” The present application discloses multiple processing branches with each branch having an equalizer. Thus, in the present application there are a plurality of branches and a plurality of equalizers.

The multiple processing branches and the multiple equalizers enable the present invention to avoid the need for a rake detector as required in Rademacher. The receiver includes an adaptive loop that includes both channel equalization and a decoding operation. The result of the decoding is used both for estimating the data in the code-division-multiple-access (CDMA) signals intended for the receiver and, in a feedback loop, to adjust the setting of the equalizer weights. The receiver includes a processing branch for each of a number of cells from which the receiver may pick up CDMA signals. Thus, each of the plurality of adaptive loops of the present invention combines channel equalization and data detection.

Claim 1 is patentable over Rademacher because that reference does not disclose each and every feature recited in the claim. In particular, Rademacher does not disclose, “a plurality of branch processing means . . . each . . . arranged to modify the received signal by the operations

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of: (i) data equalization, based on a respective filter using a respective set of weights . . ." and, thus, does not disclose multiple branch processors each including an equalizer and a decoder.

For reasons similar or somewhat similar to those described above with regard to independent claim 1, independent claims 8 and 15 are also believed to be patentable.

V. DEPENDENT CLAIMS

The other claims are dependent from one of the claims discussed above and are therefore believed patentable for at least the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

Claims 1-15 are in condition for allowance. In the event the Examiner disagrees with any of statements appearing above with respect to the disclosure in the cited reference, or references, it is respectfully requested that the Examiner specifically indicate those portions of the reference, or references, providing the basis for a contrary view.

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In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully request early passage to issue of the present application.

Respectfully submitted,

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